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Patent Application

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Inventor(s): Edmund J. Kelly, Robert F. Cmelik and Malcolm J. King

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Title: TRANSLATED MEMORY PROTECTION APPARATUS FOR AN ADVANCED MICROPROCESSOR

Form 1449

U.S. Patent Documents

| Examiner Initial | No. | Patent No. | Date | Patentee | Class | Sub-class | Filing Date |
|------------------|-----|------------|----------|-------------------|-------|-----------|-------------|
| TH | A | 5,349,658 | 09/20/94 | O'Rourke et al. | 395 | 700 | 11/01/91 |
| TH | B | 5,467,473 | 11/14/95 | Kahle et al. | 395 | 800 | 01/08/93 |
| TH | C | 5,875,340 | 02/23/99 | Quarnstrom et al. | 395 | 733 | 05/31/96 |
| TH | D | 5,274,815 | 12/28/93 | Trissel et al. | 395 | 700 | 11/01/91 |
| TH | E | 6,031,992 | 02/29/00 | Cmelik et al. | 395 | 705 | 07/05/96 |
| TH | F | 4,530,050 | 07/16/85 | Fukunaga et al. | 364 | 200 | 08/17/82 |
| TH | G | 5,553,255 | 09/03/96 | Jain et al. | 395 | 375 | 04/27/95 |
| TH | H | 4,896,257 | 01/23/90 | Ikeda et al. | 364 | 200 | 11/28/88 |
| TH | I | 5,581,722 | 12/03/96 | Welland | 395 | 417 | 09/26/94 |
| TH | J | 5,613,083 | 03/18/97 | Glew et al. | 395 | 417 | 09/30/94 |
| TH | K | 5,442,766 | 08/15/95 | Chu et al. | 395 | 414 | 10/09/92 |
| TH | L | 4,954,942 | 09/04/90 | Masuda et al. | 364 | 200 | 11/17/88 |
| TH | M | 5,465,337 | 11/07/95 | Kong et al. | 395 | 417 | 10/05/94 |
| TH | N | 5,526,510 | 06/11/96 | Akkary et al. | 395 | 460 | 09/30/94 |
| TH | O | 5,142,672 | 08/25/92 | Johnson et al. | 395 | 500 | 12/15/87 |
| TH | P | 5,561,814 | 10/01/96 | Glew et al. | 395 | 833 | 12/22/93 |
| TH | Q | 5,930,832 | 07/27/99 | Heaslip et al. | 711 | 207 | 06/07/96 |
| TH | R | 5,958,061 | 09/28/99 | Kelly et al. | 714 | 1 | 07/24/96 |
| TH | S | 5,805,490 | 09/08/98 | Machida | 364 | 784.01 | 07/10/95 |
| TH | T | 5,282,274 | 01/25/94 | Liu | 395 | 400 | 05/24/90 |
| TH | U | 4,481,573 | 11/06/84 | Fukunaga et al. | 364 | 200 | 11/13/81 |
| TH | V | 5,361,340 | 11/01/94 | Kelly et al. | 395 | 400 | 03/09/93 |
| TH | W | 4,825,412 | 04/25/89 | Sager et al. | 365 | 49 | 04/01/88 |
| TH | X | 4,914,577 | 04/03/90 | Stewart et al. | 364 | 200 | 07/16/87 |
| TH | Y | 5,577,231 | 11/19/96 | Scalzi et al. | 395 | 500 | 12/06/94 |
| TH | Z | 5,097,409 | 03/17/92 | Schwartz et al. | 395 | 425 | 06/18/91 |
| TH | AA | 5,623,628 | 04/22/97 | Brayton et al. | 395 | 468 | 03/02/94 |
| TH | BB | 4,928,225 | 05/22/90 | McCarthy et al. | 364 | 200 | 09/02/88 |
| TH | CC | 5,197,144 | 03/23/93 | Edenfield et al. | 395 | 425 | 02/26/90 |
| TH | DD | 5,247,648 | 09/21/93 | Watkins et al. | 395 | 425 | 04/30/92 |
| TH | EE | 5,317,720 | 05/31/94 | Stamm et al. | 395 | 425 | 03/22/93 |
| TH | FF | 5,239,646 | 08/24/93 | Kimura | 395 | 575 | 07/02/90 |
| TH | GG | 4,598,402 | 07/01/86 | Matsumoto et al. | 371 | 38 | 11/07/83 |
| TH | HH | 4,458,316 | 07/03/84 | Fry et al. | 364 | 200 | 10/11/83 |
| TH | II | 5,463,767 | 10/31/95 | Joichi et al. | 395 | 183.13 | 02/24/93 |



U.S. Pat nt Documents

| Examiner Initial | No. | Patent No. | Date | Patentee | Class | Sub-class | Filing Date |
|------------------|-----|------------|----------|----------------------|-------|-----------|-------------|
| TH | JJ | 4,607,331 | 08/19/86 | Goodrich, Jr. et al. | 364 | 200 | 05/13/83 |
| TH | KK | 4,467,411 | 08/21/84 | Fry et al. | 364 | 200 | 03/06/81 |
| TH | LL | 3,863,228 | 01/28/75 | Taylor | 340 | 172.5 | 12/13/73 |
| TH | MM | 5,517,615 | 05/14/96 | Sefidvash et al. | 395 | 182.03 | 08/15/94 |
| TH | NN | 5,564,111 | 10/08/96 | Glew et al. | 395 | 185.06 | 09/30/94 |
| TH | OO | 5,566,298 | 10/15/96 | Boggs et al. | 395 | 182.08 | 03/01/94 |
| TH | PP | 5,574,927 | 11/12/96 | Scantlin | 395 | 800 | 03/25/94 |
| TH | QQ | 5,721,927 | 02/24/98 | Baraz et al. | 395 | 705 | 08/07/96 |
| TH | RR | 5,768,567 | 06/16/98 | Klein et al. | 395 | 500 | 05/14/96 |
| TH | SS | 5,838,948 | 11/17/98 | Bunza | 395 | 500 | 12/01/95 |
| TH | TT | 5,481,685 | 01/02/96 | Nguyen et al. | 395 | 375 | 11/21/94 |
| TH | UU | 5,644,742 | 07/01/97 | Shen et al. | 395 | 591 | 06/07/95 |
| TH | VV | 5,638,525 | 06/10/97 | Hammond et al. | 395 | 385 | 10/02/95 |
| TH | WW | 5,613,090 | 03/18/97 | Willems | 395 | 500 | 10/05/93 |
| TH | XX | 5,604,753 | 02/18/97 | Bauer et al. | 371 | 40.1 | 01/04/94 |
| TH | YY | 5,598,560 | 01/28/97 | Benson | 395 | 707 | 03/07/91 |
| TH | ZZ | 5,598,546 | 01/28/97 | Blomgren | 395 | 385 | 08/31/94 |
| TH | AAA | 5,574,922 | 11/12/96 | James | 395 | 561 | 06/17/94 |
| TH | BBB | 5,546,552 | 08/13/96 | Coon et al. | 395 | 375 | 05/12/95 |
| TH | CCC | 5,528,755 | 06/18/96 | Beardsley et al. | 395 | 185.01 | 12/22/92 |
| TH | DDD | 5,564,104 | 10/08/96 | Yamashita et al. | 395 | 182.15 | 08/25/94 |
| TH | EEE | 5,507,030 | 04/09/96 | Sites | 395 | 800 | 03/07/91 |
| TH | FFF | 5,247,628 | 09/21/93 | Grohoski | 395 | 375 | 01/17/90 |
| TH | GGG | 4,992,934 | 02/12/91 | Portanova et al. | 364 | 200 | 03/30/90 |

Foreign Patent or Published Foreign Patent Application

| Examiner Initial | No. | Document No. | Publication Date | Country or Patent Office | Class | Sub-class | Translation | |
|------------------|-----|--------------|------------------|--------------------------|-------|-----------|-------------|----|
| | RRH | 0651331A1 | 03.05.95 | EUROPE | G06F | 12/08 | Yes | No |
| | | | | | | | X | |

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Other Documents

| Examiner Initial | No. | Author, Title, Date, Place (e.g. Journal) of Publication |
|------------------|-----------------|---|
| TH | III | Halfhill; "EMULATION: RISC'S SECRET WEAPON"; Special Report: The RISC Decision; BYTE April 1994 |
| TH | JJJ | Andrews et al.; "MIGRATING A CISC COMPUTER FAMILY ONTO RISC VIA OBJECT CODE TRANSLATION"; Tandem Computers, Cupertino, CA 1992 Pgs 213-222; Association of Computing Machinery 1992 |
| TH | KKK | Omeliik et al.; "SHADE: A FAST INSTRUCTIONSET SIMULATOR FOR EXECUTION PROFILING"; Association for Computing Machinery 1994 |
| TH | LLL | Bedichek; "TALISMAN FAST AND ACCURATE MULTICOMPUTER SIMULATION"; Lab for Computer Science Cambridge MA; Association of Computing Machinery 1995 |
| TH | MMM | Ando et al.; "UNCONSTRAINED SPECULATIVE EXECUTION WITH PREDICATED STATE BUFFERING"; System LSI Laboratory, Japan; pgs 126-13; Association of Computing Machinery 1995 |
| TH | NNN | May; "MIMIC: A FAST SYSTEM/370 SIMULATOR; IBM Thomas J. Watson Research Center NY; Association of Computing Machinery 1987 |
| TH | OOO | Tremblay et al.; "A FAST AND FLEXIBLE PERFORMANCE SIMULATOR FOR MICRO-ARCHITECTURE TRADE-OFF ANALYSIS ON ULTRAPARC-I"; 32nd Design Automation Conference; San Francisco, CA 1995 |
| TH | PPP | Kumar et al.; "EMULATION VERIFICATION OF THE MOTOROLA 68060"; Motorola Inc.; Austin, TX; 1995 IEEE |
| TH | QQQ | Note et al.; "RAPID PROTOTYPING OF DSP SYSTEMS: REQUIREMENTS AND SOLUTIONS"; Philips ITCL Belgium; 1995 IEEE |
| TH | RRR | Witchel et al.; "EMBRA FAST AND FLEXIBLE MACHINE SIMULATION"; Sigmetrics ACM 1996; pages 68-79 |
| Examiner | THAN V. THAI | |
| | Date Considered | 01/07/04 |

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered.
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